Google Working on Tablets With Enhanced Vision Capabilities

The prototype Google tablets will include gear aimed at capturing 3D images, according to a report.

Google is working to create some 4,000 prototypes of advanced mobile tablet devices equipped with features that will allow users to view complex 3D objects on their screens.

The development of the futuristic tablets, which are allegedly slated to begin production sometime in June, was reported May 22 by *The Wall Street Journal*, based on information from sources who had been briefed on Google's activities. The tablets will be equipped with 7-inch screens and include two rear cameras, infrared depth sensors and software that will render the three-dimensional images, the story reported.

Google did not respond immediately to several *eWEEK* emailed inquiries about the report.

The *Journal* story said that the new tablet devices are being developed as part of Google's Project Tango research efforts. The devices "could be released ahead of the company's annual [Google I/O 2014] developer conference scheduled for the end of June," the story continued. Project Tango was launched in February 2014 by Google's ATAP group as an initiative to compress current understandings about robotics and computer vision into a mobile phone, according to an earlier *eWEEK* report. The first Project Tango initiative was the creation of a mobile phone with highly customized hardware and software designed to track the phone's motion in full 3D, in real time, while it is being held by a user. The phone included a 5-inch display, a 4-megapixel camera at the top rear of the phone, 2x computer vision

processors, integrated depth sensing and a motion-tracking camera on the bottom of the back of the phone. Such a phone could be used, according to Project Tango, with apps that could use the camera to offer guidance to the visually impaired or even apps that use the camera to show shoppers how the furniture in a catalog would literally fit in their living rooms. Other potential apps could even scan a room

in a home to create a virtual game world within it, or offer directions that don't stop at the front door of an office building.

The idea of Project Tango is to allow people to interact with their environments in the future in ways that are very different from today.

Some 200 thick, white phone prototypes were built by ATAP for the phone project. Some have been allocated for projects related to indoor mapping and others for gaming. But it has set aside some units for "applications we haven't thought of yet," said the Project Tango site, offering an application to apply to receive a device. Google is often working on cutting-edge ideas for future projects, including its expanding efforts with its eyewear-mounted Google Glass devices. Earlier in May, Google announced that anyone in the United States can now buy a beta version Glass device as long as the company has them in stock. The Glass devices, which sell for $1,500 plus taxes, can be configured and ordered at the Glass Website, according to Google. Several options and add-ons can raise the price of the devices. Google Glass has been a topic of conversation among techies since news of it first surfaced in 2012. The first Google Glass units began shipping in April 2013 to developers who signed up at the June 2012 Google I/O developers conference to buy an early set for $1,500 for testing and development; the new technology was the hit of the conference. Google also then began shipping Glass units to lucky users who were given the privilege to buy their own early versions of Glass.

Each Google Glass device includes adjustable nose pads and a high-resolution display that Google said is the equivalent of a 25-inch high-definition screen from 8

feet away. The glasses also feature a built-in camera that takes 5-megapixel photos and video at 720p. Audio is delivered to wearers through their bones, using bone-conduction transducers.

Another futuristic project being pursued by Google is its Project Loon experiment that began in 2013, according to earlier *eWEEK* reports. Project Loon uses a series of high-altitude balloons to build a high-speed Internet network that could be used to bring affordable Internet service to far-flung locations around the world for the first time, according to Google. The experiment is being touted as a high-tech way to create Internet connections for two-thirds of the people in the world who currently don't have Internet access due to high costs and the difficulty of stringing

connections in rural and far-flung parts of the world.

The Loon concepts were first tested in June 2013 in an experimental pilot project in Christchurch and Canterbury in New Zealand, where 50 volunteer testers worked to connect with the balloons high above, according to Google. The New Zealand pilot tests showed that the concept could work and confirmed that balloon-powered Internet may be a viable approach.